have to be very strong. We cannot help but feel that while the observations recorded in these "studies" are of great interest, some of the conclusions are entirely too sweeping. The occurrence of centrosomes in the higher plants is far from settled, and the occurrence of a multipolar phase as necessarily antecedent to the bipolar phase of a spindle may be regarded as still an open question.

The result of these "studies" will be to stimulate investigation greatly rather than to command immediate belief in the more important conclusions, and investigation is always more important than belief.—J. M. C.

MINOR NOTICES.

T. D. A. COCKERELL[4] has published a remarkably full list of the food plants of scale insects. The preparation of the summary has emphasized two facts, viz., "the unexpected number of coccids found on many of the cultivated trees and shrubs, and the frequency with which species dangerous to fruit trees will occur on ornamental plants, which may be carried from place to place and be the means of disseminating the scales."—J. M. C.

THE FOURTH PART of *Flora Franciscana*[5] has just appeared, and is devoted to the Compositæ. As Professor Greene has been much concerned with various sections of this great group, it is of great interest to have the results of his studies brought together, so far as they can be within the limited range of this work. Space forbids mention of the numerous shiftings of generic boundaries and the new species described. Many of the author's views of the genera of Compositæ have been published already, but the contribution before us contains much new material. The richness of the Californian flora may be judged by the fact that the portion of it represented in this *Flora* contains 113 genera of Compositæ, and 492 species. The general character of the composite flora may be judged from the following summary of the number of species under each of the ten groups called "sub-orders," and named as follows: Eupatoriaceæ 9, Asteraceæ 149, Gnaphaliaceæ 30, Ambrosiaceæ 7, Helianthaceæ 29, Madiaceæ 79, Helenioideæ 76, Anthemideæ 25, Senecionideæ 59, Cynarocephalæ 29.—J. M. C.

NOTES FOR STUDENTS.

ITEMS OF TAXONOMIC INTEREST are as follows: Karl M. Wiegand[6] has been studying *Galium trifidum* and its North American allies, and finds that this reputed "variable species" is a plexus of forms. He has used the form

[4] Proc. U. S. Nat. Mus. **19**: 725–785. 1897.

[5] GREENE, EDWARD L.—Flora Franciscana. An attempt to classify and describe the vascular plants of middle California. Part IV. Pp. 353–480. San Francisco: Payot, Upham & Co. London: William Wesley & Son. 1897. $1.00

[6] Bull. Torr. Bot. Club **24**: 389–403. 1897.